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The Comorbidity of Psychopathy, Anxiety, and Depression Disorder

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Résumé

La psychopathie est un désordre de la personnalité caractérisé par des traits de comportement, tels qu'un manque d'empathie, du narcissisme, une estime de soi élevée, etc. Souvent, ces traits sont considérés comme indésirables. Ces caractéristiques se manifestent chez l'homme et la femme, autant dans la population criminelle que non-criminelle. L'étude de la psychopathie et la relation entre celle-ci et d'autres désordres mentaux représente un domaine relativement novateur de la psychologie. Des études démontrent une forte corrélation négative entre la psychopathie et l'anxiété, et entre la psychopathie et la dépression. Au total, 92 étudiants actuels ou ayant récemment graduées, au niveau du baccalauréat, de la maîtrise, et du doctorat ont été recrutés pour participer à cette étude. Ces participants ont complété quatre questionnaires standardisées qui évaluent leur niveau de psychopathie, d'anxiété et de dépression. Les évaluations utilisées sont le « Levenson's Self-Report Psychopathy scale », le « Childhood and Adolescent Taxon Self-Report », le « Beck Depression Inventory », et le « Beck Anxiety Inventory ». Les résultats suggèrent l'existence d'une forte corrélation positive entre la dépression et la psychopathie, entre l'anxiété et la psychopathie, et entre l'anxiété et la dépression. Des variables additionnelles, tels que le sexe et l'éducation antérieure, contribuent aussi de façon significatives à ce modèle. Les résultats sont analysés tout en considérant des études antérieures et l'importance de la comorbidité psychopathique dans la recherche à venir.

Mots-clés: psychopathie; anxiété; dépression; comorbidité; non-criminelle

Abstract

Psychopathy is a personality disorder characterized by behavioral traits that are often considered undesirable. These traits include callousness, lack of empathy, narcissism, and increased sense of self-worth. These characteristics of psychopathy manifest themselves in men and women alike, and within both criminal and noncriminal populations. The study of the relationship between psychopathy and other mental disorders is a relatively new area of research within the field of psychology. The present study attempted to expand this area of research, namely by examining the relationship between psychopathy, anxiety, and depression. Studies conducted on this relationship have thus far shown that both anxiety and depression disorder are significantly and negatively correlated with psychopathy. For the present study, a total of 92 currently enrolled or recently graduated undergraduate and graduate students were recruited for participation. The participants completed four standardized scales that assessed their level of psychopathy, anxiety, and depression disorder. Participants were assessed using the Levenson's Self-Report Psychopathy scale, the Childhood and Adolescent Taxon Self-Report, the Beck Depression Inventory, and the Beck Anxiety Inventory. The results suggested that both anxiety and depression are positively and significantly correlated with psychopathy as well as with each other. Additional variables, such as gender and educational origins, were found to contribute significantly to the model. The discussion of the results of the present study includes the findings of previous, related research as well as the importance of psychopathic comorbidity analyses in future research.

Keywords: psychopathy; anxiety; depression; comorbidity; noncriminal

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Introduction

Hervey Cleckley first discussed psychopathy in his book, "The Mask of Sanity." Published in 1941, this book was a landmark in psychology and psychiatry. Cleckley's work initially focused on institutionalized male patients with psychopathic tendencies but as his interest grew, so did the diversity of the patients selected for observation. His studies were expanded to include women and children. Cleckley's book comprises detailed accounts of numerous individuals that he observed and the evolution of their behavior over the years.

Following Cleckley's work, Hare (1996) noted that "Psychopathy is a socially devastating disorder defined by a constellation of affective, interpersonal, and behavioral characteristics" (Hare, 1996, p. 25). Psychopaths, as defined by Hare (1996), are self-involved and care little for others. The absence of profound feelings of guilt, regret or remorse, together with an absence of conscience are thought to render psychopaths unhesitant to develop and follow their own rules. The classic components of psychopathy include lack of empathy, shallow emotions, lying and manipulation, impulsivity, low tolerance for boredom, poor behavior controls, remorselessness, promiscuous sexual behavior, juvenile delinquency, criminal versatility, parasitic lifestyle, many short term relationships, and the lack of realistic long term goals (Cleckley, 1976; Hare, 1980).

Superficial charm is a recognized characteristic displayed by all individuals with psychopathic tendencies. This trait emphasizes a lack of self-consciousness and shyness that is reflected in the behavior of psychopaths. These qualities allow psychopaths to engage in enjoyable and persuasive conversation, as they are able to portray a confident and charismatic personality (Hare, 1994). Egocentricity and grandiosity are also important components of psychopathy. Psychopaths have an over-exaggerated sense of self-worth, and believe they are

important and should be the center of attention at all times. As well, psychopaths are naïve to the basic understanding of requirements in social situations and work environments. They are constantly under the impression they are able to excel and accomplish tasks in which they have no formal education or training (Hare, 1994).

The DSM-II (Diagnostic and Statistical Manual of Mental Disorders, 1968) initially described typical psychopathy characteristics, however, referred to the psychopath as displaying antisocial personality. This second edition of the DSM described individuals displaying antisocial personality as "unsocialized, incapable of loyalty to individuals or groups, impulsive, guiltless, selfish, unable to learn from experience, and callous individuals whose behavior pattern brings them repeatedly into conflict with society," (2nd ed.; DSM-II; American Psychiatric Association, 1968, p. 43). Unfortunately, this version of the DSM did not offer any definitive diagnostic criteria for psychopathy; thus, researchers were forced to rely on other means of assessment such as personality tests and self-reports that were not conducive to an appropriate diagnosis (Hare, 1996).

When the DSM-III was published in 1980, the term psychopathy was replaced with "antisocial personality disorder." The diagnostic criteria associated with antisocial personality disorder were and are not synonymous with psychopathy as initially conceived by Cleckley. The criteria for antisocial personality disorder place a heavy emphasis on delinquent behaviors such as violations of social norms, truancy, lying, stealing, vandalism, aggression, inconsistent work behavior, and more (3rd ed.; DSM-III; American Psychiatric Association; 1980).

The DSM-IV (1994) and the DSM-IV-TR (2000) attempted to improve the diagnostic criteria for antisocial personality disorder to include more classic psychopathy symptoms. Several of the classic characteristics of the disorder encompass the following: deceitfulness, lack

of empathy, manipulation, superficial charm, inflated and arrogant self-appraisal, and excessively opinionated and self-assured (4th ed.; DSM-IV; American Psychiatric Association; 1994). The antisocial personality disorder diagnosis is given to individuals of minimum eighteen years of age, and who have displayed symptoms relating to the violation of social norms, which commenced at the age of fifteen. As well, an individual diagnosed must have displayed symptoms of Conduct Disorder[1] in their childhood and early adolescent. Unfortunately, despite these changes, there was a lack of specific criteria in the DSM-IV and DSM-IV-TR; thus, it was difficult to consider psychopathy as a diagnostic category in and of itself. What can be stated, however, is that it is more likely for an individual experiencing psychopathy to meet criteria for antisocial personality disorder then a patient with antisocial personality disorder to meet criteria for psychopathy (Hare, 1996).

Clarifying the theoretical boundaries between antisocial personality disorder and psychopathy diagnoses continue to remain challenging. It has, though, been said that both antisocial personality disorder and psychopathy are two clinically different diagnostic constructs (Coid & Ullrich, 2010; Cunningham & Reidy, 1998; Kosson, Lorenz, & Newman, 2006). However, researchers remain uncertain as to whether or not psychopathy manifests as a severe form of antisocial personality disorder (Coid & Ullrich, 2010). A recent study by Venables, Hall, and Patrick (2013) set off to help in the clarification of said boundaries between the two disorders. The participants were male offenders from two correctional facilities (N = 157 and N = 169). The authors used scales to evaluate the participant's level of boldness or fearless

[1] According to the DSM-IV, Conduct Disorder involves "a repetitive and persistent pattern of behavior in which the basic rights of others or major age-appropriate societal normal or rules are violated. The specific behavior characteristics of Conduct Disorder fall into one of the four categories: aggression to people and animals, destruction of property, deceitfulness or theft, or serious violation of rules" (American Psychiatric Association, 1994, p. 646).

dominance, psychopathy, and antisocial personality disorder. Their results highlight boldness as being a distinguishing factor between psychopathy and antisocial personality disorder. Other scholars contend that the underlying differences between psychopathy and antisocial personality disorder could be related to distress tolerance (Sargeant, Daughters, Curtin, Schuster, & Lejuez, 2011), affective, interpersonal (Hare, Hart, & Harpur, 1991), and negative, emotional (Verona, Sprague, & Sadeh, 2012) processes.

Currently, the most popular measure of psychopathy is The Hare Psychopathy Checklist-Revised (Hare PCL-R). The PCL-R was derived from the Psychopathy Checklist (Hare PCL; 1980), which was developed to differentiate individuals with and without psychopathic characteristics and to create a reliable, valid, and acceptable means of measuring psychopathy (Hare, 1980). The PCL was twenty-two items, which were scored on a three-point scale (zero, one or two) and based on the sixteen criteria of psychopathy outlined by Cleckley (see Appendix A and Appendix B; Hare, 1980). The PCL was initially administered to 143 white male prison inmates. To assess the reliability of the scale, alpha coefficients were computed, yielding a score of 0.88, indicating a high level of reliability (Hare, 1980). This measure was initially used to assess behavior in adult male patients that were in prison, criminal psychiatric hospitals, or those in other correctional units awaiting psychiatric evaluations (Hare, 1980).

In 1985, the revised version of the PCL was introduced. The PCL-R measures "behaviors and inferred personality traits that are thought to be essential to the clinical construct of psychopathy as exemplified by Cleckley (1976)," (Hobson & Shine, 1998, p.506). Based on commentary and suggestions following the release of the PCL, items such as "Drug or alcohol abuse not direct cause of antisocial behavior" and "Previous diagnosis as psychopath or similar" were removed from the scale (Patrick, 2007). Other changes to the scale consisted of modifying

a total of twelve other item headings, detailing and removing inconsistencies in scoring criteria as well as detailing descriptions of the scales (Patrick, 2007).

The PCL-R is now comprised of twenty items, each of which reflects a distinctive feature of psychopathy. The features are scored on a three-point scale (zero, one or two), and the sum of all the items is designed to determine if an individual could be characterized as displaying traits of psychopathic personality (Cooke, Michie, Hart, & Hare, 1999). Scoring the PCL-R yields scores on two correlated factors: Factor 1 reflects the affective and interpersonal features of psychopathy; Factor 2 reflects social deviance features. The features included in Factor 1 are selfishness, callousness, and remorseless use of others and those included in Factor 2 are chronically unstable, antisocial, and socially deviant lifestyle (Hare, 1996). As well, distinctive of the revised version is its effectiveness for diagnosing female and sexual offenders.

The PCL-R has been shown to be a valid and reliable measure of psychopathy. The PCL-R has a satisfactory inter-rater reliability and a high internal consistency (Hobson & Shines, 1998). Estimates of validity are strong with respect to content-related validity, concurrent validity, predictive validity and convergent and discriminative abilities (Hobson & Shines, 1998).

There are, however, several disadvantages of administering the PCL-R: The test is expensive, requires considerable time to score, and it is not applicable for patients that are not in a forensic setting (Cooke, et al., 1999). In light of these disadvantages, the development of the Screening version of the PCL-R came about. The Screening version was not developed with the intention of replacing the existing PCL-R, but instead to conduct an initial detection device.

There are also several measures of psychopathy in a non-criminal sample. The most common measures used are the Levenson's primary and secondary psychopathy scales (Levenson, Kiehl, & Fitzpatrick, 1995), the psychopathic personality inventory (Lilienfeld &

Andrews, 1996), the behavioral activation/inhibition system scales (Carver & White, 1994), and the self-report psychopathy scale (Levenson et al., 1995).

The self-report psychopathy scale is a measure modeled on the PCL-R. It is comprised of twenty-six items, which are divided into two scales; the primary and the secondary psychopathy scales, both of which are based on the two-factors of the PCL-R (Brinkley, Schmitt, Smith, & Newman, 2001). More specifically, primary psychopaths are characterized as callous, manipulative, massively selfish, and untruthful, all of which embody core emotional deficits (Kimonis, Frick, Cauffman, Goldweber, & Skeem, 2012). On the contrary, secondary psychopathy variants are characterized by extreme impulsivity, neuroticism, reactively hostile, angry, moody, and behavioral deviance (Blackburn, 1975; Kimonis, et al., 2012). In order to test the relationship between the PCL-R and the self-report psychopathy scale, Brinkley et al. (2001) administered both measures to a sample of male prison inmates (N = 270 Caucasian, N = 279 African-American). The authors reported a sizable and significant correlation ($r = .35$, $p < 0.01$).

Although there has been much debate as to whether "psychopathy" is a taxon or is a continuous variable, most investigations have found it more convenient to treat psychopathy as a continuous variable. It is, therefore, important to differentiate between individuals that display psychopathic traits in the general population, "successful psychopaths", and those that exhibit psychopathic characteristics in an incarcerated population. Successful psychopaths are individuals classified as having psychopathic tendencies and fitting the criteria for psychopathy, but who lack the severe antisocial behavior component (Hall & Benning, 2006). The term "successful", which originated in Cleckley's (1941) work, was coined to describe individuals who possess these central characteristics of a criminal psychopath, but are able to avoid arrest and conviction (Hall & Benning, 2006). Although the underlying behaviors and affect are the

same in both populations, they are manifested differently. Virtually all professions could accommodate individuals with psychopathic tendencies such as lawyers, businessmen, professors, politicians and more (Cleckley, 1976). As such, the existence of psychopathic characteristics may or may not serve as beneficial in any one of these occupations.

A study by Ishikawa, Raine, Lencz, Bihrle, and Lacasse (2001) examined the relationship between successful and unsuccessful psychopaths in a community sample. Males between the ages of twenty-one and forty-five were recruited (N = 91) from several temporary employment agencies. These men were classified into three groups based on the scores they obtained on the PCL-R; those scoring in the middle third were not considered for the study. With a total of thirteen successful psychopaths and sixteen unsuccessful psychopaths, the results showed that unsuccessful psychopaths scored higher on the PCL-R in comparison to successful psychopaths. Nevertheless, scores on the predominant aspects of psychopathy (e.g. superficial charm, poor empathy, callousness) were similar in both groups.

Non-incarcerated psychopaths are of interest in the clinical and theoretical domain of psychology. They are often included in studies to expand the knowledge and understanding of psychopathy (Kirkman, 2002). Studying non-incarcerated individuals with psychopathic tendencies is also important in that it serves as an aide in the differentiation between the underlying constructs of psychopathy and criminality (Hall & Benning, 2006). Several factors, such as intelligence and the presence of role models, might be a suitable explanation for why non-incarcerated psychopaths are able to avoid manifesting anti-social behavior (Lilienfeld, 1994). Theoretically, researchers question the relationship between psychopathy and criminality, as well as the extent to which core related features should be considered pathological (Hall & Benning, 2006).

One intriguing aspect of psychopathy is its comorbidity (or lack of comorbidity) with other mental health issues such as anxiety and depression. For example, individuals who show little or no remorse, lack empathy and have a general disregard for the rights of others, should, at least theoretically, be less prone to anxiety and its related disorders. Similarly, being mainly concerned with self and disregarding the needs of others might be thought of as a protective factor against depression. In fact, the coexistence of mental disorders and psychopathy, namely anxiety and depression, has become a relatively new area of study within psychology.

Anxiety disorder is among the most prevalent mental disorders, with a lifetime occurrence of five percent (Fricchione, 2004). The disorder's typical age of onset is before twenty-five years old, with anxiety being twice as common in women in comparison to men (Fricchione, 2004). The mental disorder that coexists most frequently with anxiety is depression. Individuals suffering from a major depressive disorder have affect, mood, neurovegetative function, cognition, and psychomotor activity abnormalities (Fava & Kendler, 2000). Similar to anxiety disorder, prevalence rates suggest that depression is nearly twice as common in women than in men (Fava & Kendler, 2000).

Hare (1982) administered The Eysenck Personality Questionnaire (Eysenck and Eysenck, 1975) to incarcerated male inmates (N=173) who were assessed voluntarily for psychopathic traits. In this study, Hare reported the results of a series of comparisons between the different dimensions of the Eysench Personality Questionnaire, with specific attention to psychoticism, extraversion and neuroticism, and the assessments of psychopathy. Surprisingly, the results of this study suggested that the domain of neuroticism, consisting of anxiety, angry hostility, depression, self-consciousness, impulsiveness, and vulnerability, was not significantly correlated with psychopathy ($r = -.04$).

Miller, Lynam, Widiger, and Leukefeld (2001) focused their study on a hypothesis initially generated by Widiger and Lynam (1998), which assessed the ability of the Five-Factor model of Personality to be representative of psychopathy. The participants (N = 481 - 242 males and 239 females) were a sample of non-incarcerated individuals originally utilized in a longitudinal study, which assessed substance abuse. Participants were asked to complete a series of questionnaires, the first being the Revised NEO-Personality Inventory scale (NEO-PI-R; Costa & McCrae, 1992), a self-report questionnaire, to assess normal personality domains. In an effort to assess psychopathy, participants also completed the Levenson Self-Report Psychopathy Scale (LSRP; Levenson, Kiehl, & Fitzpatrick, 1995). In addition, a thirty-item questionnaire, each item representing a facet of the Revised NEO-personality Inventory scale, was sent to psychopathy experts (N = 21). The latter were asked to rate the prototypical psychopath according to each facet using a five-point Likert scale, wherein one signified an extremely low measure of psychopathy and five an extremely high measure of psychopathy. The mean score of each item was taken from all the experts to create a psychopathy profile. Each participant's score on the Revised NEO-Personality Inventory Scale was subsequently compared to the psychopathy profile to yield a score of psychopathy.

The results showed that many facets of Neuroticism including Anxiety and Depression displayed relatively low mean scores. The analysis of individual facets of Neuroticism revealed that anxiety (men: $r = -.28$, $p < .001$, women: $r = -.36$, $p < .001$) and depression (men: $r = -.27$, $p < .001$, women: $r = -.26$, $p < .001$) were significantly and negatively correlated with psychopathy (Miller, Lyman, Widiger, & Leukefeld, 2001). In sum, Miller et al. (2001) concluded that the distribution of mean scores for depression ($\bar{x}$=1.40) and anxiety ($\bar{x}$=1.47) suggested the psychopath was low in these facets.

An alternate approach to expert ratings, as outlined in the aforementioned study, was the empirical placement of psychopathy within the Five-Factor Model. For example, Lynam and Widiger (2007) combined the results from Hicklin and Widiger (2005) and Derefinko and Lynam (2006) in order to assess the scores obtained from the Psychopathic Personality Inventory (PPI; Lilienfeld & Andrews, 1996) and the Hare Self-report Psychopathy scale (HSRP; Hare, 1991). Both Hicklin and Widiger (N = 214) and Derefinko and Lynam (N = 346) recruited undergraduate students to participate in their research. The results showed that psychopathy was significantly and negatively correlated with anxiety (PPI: $r = -.31$, $p < .01$, HSRP: $r = -.31$, $p < .01$) and depression (PPI: $r = -.05$, $P > .01$, HSRP: $r = -.14$, $p < .01$). In sum, both expert and empirical ratings suggested that anxiety and depression were negatively correlated with psychopathy (Lynam & Widiger, 2007).

Blonigen et al. (2010) investigated the relationship between psychopathy and criteria of internalizing and externalizing domains. The internalizing domain encompassed disorders such as anxiety and depression as well as feelings of fear, sadness, worry, and distress. The externalizing domain encompassed antisocial behavior exhibited in children and adults as well as alcohol and drug dependence. Blonigen et al. included participants (N = 1,701) that were known offenders in four states in the United States. Participants were assessed using the PCL-R (Hare, 1991), the Psychopathic Personality Inventory (PPI; Lilienfed & Andrews, 1996), and self-report measures of internalizing and externalizing domains. All participants were interviewed in order to assess externalizing domain characteristics only. The results indicated the total score of the internalizing domain was not correlated with the PCL-R ($r = -.03$) and was only slightly positively and significantly correlated with the Psychopathic Personality Inventory ($r = .14$, $p < .01$). Furthermore, the internalizing criterion was significantly and negatively correlated with

the Psychopathy Personality Inventory subscale 1 ($r = -.51$, $P < .01$), which contains the core features of the affective-interpersonal factor of psychopathy; for instance, dominance, narcissism, etcetera. The Psychopathy Personality Inventory subscale 2 was, however, positive and significantly correlated with internalizing variables. This subscale represents the social deviance factor of psychopathy and is marked by traits of impulsivity, aggression, and alienation. There were similar findings between this criterion variable and both Factor 1 and Factor 2 of the PCL-R. Factor 1 was comprised of affective-interpersonal traits and was significant and negatively associated with internalizing variables ($r = -.12$, $p < .01$). Factor 2, which was represented by deviant lifestyle characteristics, was positively and significantly correlated with internalizing variables ($r = .08$, $p < .01$).

The total score of the externalizing domain showed a strong positive and significant correlation with the Psychopathic Personality Inventory ($r = .74$, $p < .01$) and a moderate positive and significant correlation with the PCL-R ($r = .37$, $p < .01$). This criterion variable was positively and significantly associated with both Psychopathic Personality Inventory subscale 1 ($r = .16$, $p < .01$) and subscale 2 ($r = .79$, $p < .01$). Furthermore, zero-order coefficient of Factor 1 of the PCL-R was negligible ($r = .04$) and Factor 2 of the PCL-R was positively and significantly correlated with externalizing variables ($r = .50$, $p < .01$). Overall, psychopathy scores were minimally associated with internalizing criterion variables, while externalizing criteria generated a positive association with scores on both psychopathy scales.

In addition, previous research has also assessed the relationship between antisocial personality disorder, anxiety, and depression. A study by Goodwin & Hamilton (2003) predicted that anxiety disorders would be associated with a significant increase in antisocial personality disorder. Moreover, the coexistence of anxiety disorders and antisocial personality disorder were

predicted to be coupled with a significantly increased chance of depression in comparison to individuals with either or neither of the disorders. The results showed that patients (N = 147) had a significantly higher chance of being diagnosed with a major depressive disorder when an anxiety disorder and an antisocial personality disorder were comorbid.

Likewise, individual relationships exist between psychopathy and anxiety disorders, psychopathy and depression, and anxiety and depression. A study by Dolan and Rennie (2007) used the youth version of the psychopathy checklist in a sample of incarcerated males (N = 110) with a conduct disorder. The checklist was used to examine the relationship between self-report measures of anxiety/fear and psychopathy. The results revealed a significant negative correlation between trait anxiety scores and the PCL-R youth version (PCL: YV) ($r = -.19$, $p < .01$).

Finally, Lovelace and Gannon (1999) hypothesized an inverse relationship between depression and psychopathy. This study utilized archival data containing records from 231 clients (women = 153, men = 81) from an outpatient clinic. Using the Beck Depression Inventory and the Millon Clinical Multiaxial Inventory, these authors reported significant and negative correlations between the Antisocial scale and the Dysthymia scale ($r = -.21$, $p < .01$), the Antisocial scale and the Psychotic Depression scale ($r = .01$, NS) and between the Antisocial scale and the Beck Depression Inventory ($r = -.13$, $p < .05$).

In sum, the aforementioned studies provided a glimpse into the relationships that exist between psychopathy, depression, and anxiety disorder. There appeared to be consistency amongst the results of these studies suggesting that psychopathy is negatively correlated with depression and anxiety disorder (Blonigen et al., 2010; Brinkley et al., 2004; Dolan & Rennie, 2007; Lovelace & Gagnon, 1999; Lynam & Widiger, 2007; Miller et al., 2001). Likewise, these studies constitute a firm base, to conduct the present study.

Goal

The goal of the present study is to examine if comorbid relationships exist between psychopathy, anxiety, and depression in a non-criminal sample. Based on previous research, the present study hypothesized that psychopathy and anxiety (Blonigen et al., 2010; Brinkley, Newman, Widiger, & Lynam, 2004; Dolan & Rennie, 2007; Lynam & Widiger, 2007; Miller, et al., 2001) and psychopathy and depression (Blonigen, et al., 2010; Brinkley, et al., 2004; Lovelace & Gannon, 1999; Lynam & Widiger, 2007; Miller, et al., 2001) would be negatively correlated. It was also hypothesized that measures of depression and anxiety disorders will generate a positive correlation (Dobson, 1985; Goodwin & Hamilton, 2003).

Method

Participants

A total of 93 currently enrolled or recently graduated undergraduate and graduate students from two major Canadian English speaking universities, namely McGill and Concordia University, were recruited to participate in this study. The sample was composed of 39 males (42.4%) and 53 females (57.6%) between the ages of 19 and 29, with an average age of 22.2 (SD = 1.82). There were 69 (75.0%) Caucasian participants, 12 (13%) of other ethnicities, 7 (7.6%) Asian or Asian American, 2 (2.2%) black or African American, and 2 (2.2%) Hispanic or Latino. There were 50 (54.3%) participants whom rated their social status as middle class, 36 (39.1%) as upper middle class, 4 (4.3%) as upper class, and 2 (2.2%) as lower class. The majority of participants were students (N = 72), followed by individuals employed for wages (N = 15), those self-employed (N = 4), and other (N = 1). Furthermore, there were 84 (91.3%) participants currently enrolled in or most recently graduated from a bachelor's degree, 7 (7.6%) participants in a master's degree, and 1 (1.1%) participant in a doctoral degree. One Beck Depression

Inventory Scale, one Beck Anxiety Inventory Scale, three Levenson Self-Report Psychopathy scales, and six Childhood and Adolescent Taxon Scale – Self-Report were omitted from the analyses as a result of incomplete information.

Measures

Levenson Self-Report Psychopathy Scale: The Levenson Self-Report Psychopathy Scale (Levenson, et al., 1995) was designed to reflect components of the PCL-R (See Appendix C). This scale is a self-report scale consisting of 26 items that assess both primary and secondary psychopathy (Falkenbach, Poythress, Falki, & Manchak, 2007). The items in the Levenson's Self-Report Psychopathy Scale are divided into two groups to represent both components of psychopathy. There are ten items designed to measure impulsivity and a self-defeating lifestyle (secondary psychopathy) in addition to sixteen items designed to measure interpersonal and affective features (primary psychopathy) (Falkenbach, et al., 2007). Each item was assessed on a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree).

Childhood and Adolescent Taxon Scale-Self Report: A study conducted by Harris, Rice & Quinsey (1994), consisted of using eight factors with the ability to identify childhood and adolescent delinquents into the psychopathy class: elementary school maladjustment, teen alcohol abuse score, childhood aggression, childhood behavior problems, parental alcohol problems, suspension or expulsion from school, separation from parents before the age sixteen and arrests when under age sixteen. An individual's potential to be identified in the psychopathy class was determined by the Childhood and Adolescent Taxon Scale – Self-Report (CAT-SR; Seto, Khattar, Lalumiere, & Quinsey, 1997). Questions one, two, six, and eight on the scale were scored using the following criteria: 2 (yes) or 0 (no). The remaining questions three, five, and seven on the scale were scored as follows: 0 (scores ranged from 1-2), 1 (scores ranged from 3-4)

or 2 (scores ranged from 5-7). Last, question four required determining the number of "yes" answers, and was scored as follows: 0 (0-1 "yes"), 1 (2 "yes") or 2 (3 or more "yes"). All eight variables were then summed to form a scale that ranged from 0 to 16 (See Appendix D).

Beck Depression Inventory: The Beck Depression Inventory-II (BDI-II; Beck, Steer & Brown, 1996) is a self-report scale that evaluates the severity of depression symptoms in adults and adolescents (See Appendix E). Based on the DSM-IV, this scale has shown to be reflective of major depressive disorder diagnostic criteria. The Beck Depression Inventory-II consists of 21 symptoms individually rated on a 4-point scale ranging from 0 to 3. In order to calculate the score on the measure, the sum is taken of the highest ratings for each of the 21 items (Beck, Steer, Ball, & Ranieri, 1996). The total score can range from 0 to 63 and the corresponding rates of depression according to Beck et al. (1996) are as follows: "Minimal" depression (a total score ranging from 0 to 13), "Mild" depression (a score 14 to 19), "Moderate" depression (20 to 28), and "Severe" depression (a total score ranging from 29 to 63).

Beck Anxiety Inventory: The Beck Anxiety Inventory (BAI; Beck, Epstein, Brown & Steer, 1988) is a self-report scale designed to measure individuals' level of anxiety, and it was developed primarily to differentiate anxiety disorder from depression (See Appendix F). This scale contains 21 anxiety symptoms that the individual is asked to rate based on the level of discomfort experienced by each item over the course of the past week. The 21 anxiety symptoms are measured on a 4-point scale ranging from 0 (not at all) to 3 (severely). The possible total score can therefore range from 0 to 63. Beck and Steer (1990) recommend that the total score be interpreted as follows: "Normal" anxiety represents a score ranging from 0 to 9, "Mild-moderate" anxiety represents a score ranging from 10 to 18, "Moderate-severe" is 19 to 29, and individuals with "Severe" anxiety would score between 30 and 63.

Procedure

Participants were recruited by word of mouth, direct contact within the universities, and via the Internet. The goal of the study was presented individually to each participant. Each participant was given a consent form to be signed and completed (see Appendix G). Participants were then asked to fill out a demographics questionnaire (see Appendix H), specifying their age, gender, race, employment status, level of education, and social status. Subsequently, they were presented with the four standardized scales in a counterbalanced manner. Upon completion of the scales, the research hypothesis was explained and participants had the opportunity to ask questions. The data was collected and scored according to a scoring criterion particular to each scale. A third-party rescored 100% of the total scales to ensure it was void of errors. Last, the data was entered into the statistics program SPSS for analyzing.

Statistical analysis

A multivariate analysis of the statistical variables was performed. The individual correlations and r-scores between the four scales depicting psychopathy, anxiety, and depression were stated. Simple and multiple regressions between items were executed. A series of t-tests were done using the gender and school variables to determine if psychopathy scores differed amongst them.

Results

The scores on the Levenson's self-report psychopathy scale ranged from 1 to 61 with a mean score of 22.34 (*SD* = 11.14). Separately, the primary and secondary psychopathy scores on the Levenson Self-Report Psychopathy Scale yielded mean scores of 12.84 (SD = 7.94) and 9.66 (*SD* = 4.56). The scores on the Childhood and Adolescent taxon scale ranged from 0 to 8, with a mean of 1.54 (*SD* = 2.09). The scores on the Beck Anxiety Inventory as well as the Beck

Depression Inventory ranged from 0 to 63 and 0 to 35 and their mean scores were 9.73 (*SD* = 10.01) and 8.95 (*SD* = 6.70) respectively.

Preliminary analyses

The Levenson's Self-Report Psychopathy Scale scores were normally distributed, such that the skew (.81) and Kurtosis (.74) statistics were within the acceptable threshold of 1. As well, taken individually, the primary (skewness = .53, kurtosis = -.32) and the secondary (.74, kurtosis = .68) psychopathy scores on the Levenson Self-Report Psychopathy scale were normally distributed. The Beck Depression Inventory (skewness = 1.01, kurtosis = 1.45), the Childhood and Adolescent taxon scale – self-report (skewness = 1.34, kurtosis = 0.91), and the Beck Anxiety Inventory (skewness = 2.08, kurtosis = 7.58) statistics were not normally distributed. A log transformation was applied to the latter scales, with the aim of normalizing the resulting distributions. The skewness and kurtosis variables were altered for the Beck Depression Inventory (skewness = -.83, kurtosis = .29), the Childhood and Adolescent taxon scale (skewness = -.10, kurtosis = -.95) and the Beck Anxiety Inventory (skewness = -.19, kurtosis = -.76).

Correlational Relationships

The Pearson correlations were computed to assess the individual relationships between four scales; these results are shown in Table 1. The Beck Anxiety Inventory and the Beck Depression Inventory ($r = .47$, $p < .01$), the Beck Depression Inventory and Levenson's Self-Report Psychopathy Scale ($r = .39$, $p < .01$), the Levenson's Self-Report Psychopathy Scale and the Childhood And Adolescent Taxon Scale – Self-Report ($r = .32$, $p < .05$), and the Beck Anxiety Inventory and Levenson's Self-Report Psychopathy Scale ($r = .25$, $p < .05$) generated positive and statistically significant correlations. As well, primary ($r = .28$, $p < .05$) and secondary ($r = .39$, $p < .05$) psychopathy scores, within the Levenson Self-Report Psychopathy

scale, generated positive and statistically significant correlations with the Beck Depression Inventory. In addition, secondary psychopathy scores only ($r = .39$, $p < .05$) revealed a positive and statistically significant relationship with the Beck Anxiety Inventory. The Beck Depression Inventory and the Beck Anxiety Inventory were negatively, albeit weakly, correlated with the Childhood And Adolescent Taxon Scale – Self-Report.

Table 1.

Pearson Correlation of all variables

	Beck Depression Inventory	Childhood and Adolescent Taxon – Self-Report	Beck Anxiety Inventory	Levenson Psychopathy Scale	Primary Psychopathy	Secondary Psychopathy
Beck Depression Inventory	1					
Childhood and Adolescent Taxon – Self-Report	-.01	1				
Beck Anxiety Inventory	.47**	-.07	1			
Levenson Self-Report Psychopathy Scale	.39**	.32*	.25*	1		
Primary Psychopathy	.28**	.34*	.13	.94**	1	
Secondary Psychopathy	.39**	.19	.39**	.79**	.55**	1

*. Correlations are significant at the 0.05 level
**. Correlations are significant at the 0.01 level

Spearman's rho was used to assess the relationship between continuous variables, which were not normally distributed (see Appendix I). The Childhood and Adolescent Taxon – Self-

Report was the only scale to reveal different statistically significant results from those reported in the Pearson Correlation. With that said, the aforesaid scale generated a positive and statistically significant correlation between the Beck Depression Inventory ($r = .54$, $p < .05$) and the Levenson Self-Report Psychopathy Scale ($r = .25$, $p < .05$).

Standard Multiple Regression

A series of four multiple regressions were performed in order to evaluate the relationship between the independent and dependent variables. The independent variables considered were those pertaining to psychopathy, namely the Levenson's Self-Report Psychopathy scale and the Childhood and Adolescent taxon scale – self-report. The Beck Depression Inventory and the Beck Anxiety Inventory were denoted as the dependent variables for the purpose of this study.

A positive and statistically significant model ($r = .40$, $p < .05$) with an adjusted R^2 value of .14, were the results generated from a standard multiple regression. This analysis used the primary and the secondary psychopathy scores as the predictor variables together with the Beck Depression Inventory scale, which was denoted as the dependent variable [$F(2,81) = 7.63$, $p < .05$]. The results shown in Table 2 suggested the secondary psychopathy scores were statistically and significantly predictive of the scores on the Beck Depression Inventory [$\beta = .34$, $p < .05$]. Primary psychopathy scores, however, did not contribute significantly to the model [$\beta = .10$, $p > .05$].

Table 2.

Results from a standard multiple regression: predicting depression

	B	SE	β
Constant	0.54	0.10	
Primary Psychopathy	0.00	0.01	0.10
Secondary Psychopathy	0.03	0.10	0.34**
			$R^2 = 0.16$

* $p < .05$ ** $p < .01$ *** $p < .001$

Similarly, a multiple regression was performed using the primary and secondary psychopathy scores together with the Beck Anxiety Inventory. This analysis created a positive and statistically significant model ($r = .41$, $p < .05$) with an adjusted R^2 value of .14 [$F(2,76) = 7.44$, $p < .05$]. As shown in Table 3, the secondary psychopathy scale was the only significant contributor to the model [$\beta = .46$, $p < .05$].

Table 3.

Results from a standard multiple regression: predicting anxiety

	B	SE	β
Constant	0.57	0.10	
Primary Psychopathy	-0.01	0.01	-0.13
Secondary Psychopathy	0.04	0.01	0.46***
			$R^2 = 0.16$

* $p < .05$ ** $p < .01$ *** $p < .001$

Using the Childhood and Adolescent Taxon Scale – Self-Report and the Levenson's Self-Report Psychopathy Scale labeled as predictor variables together with the Beck Depression Inventory, which was denoted as the dependent variable, a third multiple regression was performed (see Table 4). This analysis produced a positive correlation ($r = .31$, $p > .05$) with an adjusted R^2 value of .04. Overall, these variables generated a non-significant model [$F(2, 35) = 1.79$, $p > .05$). Further analysis confirmed that both the Levenson's Self-Report Psychopathy Scale [$\beta = .33$, $p > .05$] and the Childhood and Adolescent Taxon Scale – Self-Report [$\beta = -.12$, $p > .05$] did not contribute significantly to the model.

Table 4.

Results from a standard multiple regression: predicting depression

	B	SE	β	
Constant	0.81	0.13		
Levenson Self-Report Psychopathy Scale	0.01	0.01	0.33	
Childhood and Adolescent Taxon Scale	-0.12	0.19	-0.12	
				$R^2 = 0.09$

* $p < .05$ ** $p < .01$ *** $p < .001$

Table 5 shows the results of a final multiple regression that was performed using the Childhood And Adolescent Taxon Scale – Self-Report, the Levenson Self-Report Psychopathy Scale, and the Beck Anxiety Inventory. This analysis produced a positive correlation ($r = .24$, $p > .05$) with an adjusted R^2 value of .01. The model was not significant overall [$F(2, 36) = 1.11$, $p > .05$). The Levenson's Self-Report Psychopathy Scale [$\beta = .23$, $p > .05$] and the Childhood And Adolescent Taxon Scale – Self-Report [$\beta = -.20$, $p > .05$] did not contribute significantly in predicting scores on the Beck Anxiety Inventory.

Table 5.

Results from a standard multiple regression: predicting anxiety

	B	SE	β	
Constant	0.81	0.15		
Levenson Self-Report Psychopathy Scale	0.01	0.01	0.23	
Childhood and Adolescent Taxon Scale – Self-Report	-0.26	0.23	-0.19	
				$R^2 = .06$

* $p < .05$ ** $p < .01$ *** $p < .001$

T-tests

A t-test for independent samples was conducted to examine whether there was a significant difference between McGill and Concordia University students in relation to their psychopathy scores. Levene's test for significance suggested variances were unequal when evaluating the Levenson's Self-Report Psychopathy scale. The results showed that psychopathy scores were significantly different between McGill and Concordia University students using the Levenson's Self-Report Psychopathy Scale [F(88, 43.78) = 6.54, p < .05]. Concordia students (M = 28.7, SD = 12.59) reported greater psychopathy scores than McGill students (M = 19.15, SD = 8.85). The Childhood And Adolescent Taxon Scale – Self-Report assumed equal variances and the Levene's test revealed the results were not statistically significant [F(40, 33.86) = .06, p > .05].

A t-test for independent samples was also conducted to examine whether gender differences were significant in psychopathy scores. Levene's test for significance revealed unequal variances for the Levenson's Self-Report Psychopathy scale, which revealed a significant difference between males and females on said scale [F(88, 59.24) = 14.89, p < .05].

Males (M = 26.41, SD = 13.04) reported significantly higher scores on this psychopathy scale than their female counterpart (M = 19.37, SD = 8.47). The Levene's test for significance assumed equal variances for the Childhood And Adolescent Taxon Scale – Self-Report and the resulting statistical findings were not significant [$F(40, 39.77) = .01, p > .05$].

In addition, t-tests were used to determine if males and females were dissimilar in the representation of their scores on the Beck Depression Inventory and the Beck Anxiety Inventory. The findings suggested there were no statistically significant differences between gender scores on the Beck Depression Inventory [$F(84, 79.65) = .792, p > 0.05$] and on the Beck Anxiety Inventory [$F(79, 58.91) = .035, p > 0.05$]. Likewise, t-test results revealed there were no statistically significant differences between McGill and Concordia University students and their performance on the Beck Depression Inventory [$F(84, 53.14) = .150\ p > .05$] and the Beck Anxiety Inventory [$F(79, 48.24) = .168, p > .05$).

Discussion

The goal of the present thesis was to examine the relationship between psychopathy, depression, and anxiety in a normal population using four distinct questionnaires. It was hypothesized that psychopathy and anxiety, and psychopathy and depression would, respectively, be negatively correlated. It was further hypothesized that there would be a positive correlation between depression and anxiety. The results indicated that anxiety and depression were indeed positively correlated. However, the results revealed a positive rather than a negative, correlation between psychopathy, and anxiety, and depression. In the current sample, both gender and educational institutes evinced a unique contribution to the overall model.

The findings of the present study can be partially explained by results reported by researchers Blackburn (1975) and Epstein, Pythress, and Brandon (2006). For example,

Blackburn (1975) assessed psychopathy profile types wherein primary psychopathy variants revealed relatively little anxiety and rather high scores related to extraversion, impulsivity, aggression, suspicion, and psychopathic deviance. Type two, or secondary psychopathy, revealed high levels of depression, anxiety, and social avoidance, as well as low levels of extraversion and lying. Similarly, Epstein, Poythress, and Brandon (2006), reported a positive correlation between trait anxiety and secondary psychopathy and a negligible yet positive association between primary psychopathy scores and anxiety. In addition to these studies, results published by other scholars offer corroborating evidence that the primary psychopathy variant was associated with low levels of anxiety and the secondary psychopathy variant was coupled with high levels of anxiety (Kahn et al., 2013; Karpman, 1948; Skeem, Johansson, Andershed, Kerr, & Louden, 2007; Skeem, Poythress, Edens, Lilienfeld, & Cale, 2003).

Primary and secondary psychopathy scores were examined in the present study using the Levenson Self-Report Psychopathy Scale. It can be speculated that the aggregated nature of the results produced by this scale failed to reflect the true nature of the relationship between psychopathy, anxiety, and depression. More specifically, it can be speculated that the overall scores on the Levenson Self-Report Psychopathy Scale would be affected by higher scores generated by participants on the questions pertaining to secondary psychopathy. This would likewise impact the relationship between said scale in conjunction with the Beck Anxiety Inventory and the Beck Depression Inventory. As a result, primary and secondary psychopathy scores were taken individually to assess their relationship with anxiety and depression. The results of the present thesis revealed primary psychopathy was positively and significantly correlated with depression, and secondary psychopathy was positively and significantly correlated with depression and with anxiety. Subsequent analyses confirmed that secondary

psychopathy scores strengthened the ability to predict scores on the Beck Depression Inventory as well as on the Beck Anxiety Inventory. Conversely, what was not shown in the findings was the predictive ability of primary psychopathy scores on the Beck Depression Inventory and the Beck Anxiety Inventory.

Recently, researchers have shown an increased interest in the disaggregated form of psychopathy into its primary and secondary variants (Karpman, 1948; Kimonis, et al., 2012; Kimonis, Skeem, Cauffman, & Dmitrieva, 2011). Studies have gone as far as to say that the presence of trait anxiety is one the distinguishing features between primary and secondary psychopathy (Blackburn, 1975; Kimonis, et al., 2011; Levenson, et al., 1995; Skeem, et al., 2003).

In accordance with the predictions of this study, the Beck Depression Inventory and the Beck Anxiety Inventory were positively and significantly correlated. The symptoms of anxiety and depression are so closely related that the distinction between these disorders has proven difficult in the past. Attesting to the same is a study by Fava et al. (2000) that examined the comorbidity of anxiety in 255 clinically diagnosed major depressive disorder patients. Virtually half (50.6%) of the participants in this study exhibited a comorbid anxiety disorder, which included social phobia (27%) (the greatest percentage), simple phobia, panic disorder, generalized anxiety disorder, obsessive-compulsive disorder, and agoraphobia. Further speaking to the close nature of anxiety and depression is the new diagnostic category proposed for the upcoming DSM-V. The mixed anxiety depression diagnostic category was recommended to classify those suffering from subthreshold anxiety and depression (Batelaan, Spijker, de Graaf, & Cuijpers, 2012). It should also be mentioned that the impact of anxiety and depression comorbidity on an individual scale is significant. As explored by Aina and Susman (2006),

anxiety and depression comorbidity leads to "barriers to treatment and worse psychiatric outcomes, including treatment resistance, increased risk for suicide, greater chance for recurrence, and greater utilization of medical resource" (p. S9). For example, anxiety and depression comorbidity reportedly increased the risk of suicide from 7.9% to 19.8% (Aina & Susman, 2006).

Another noteworthy aspect of this thesis was the perceived gender differences in psychopathy scores. Results show that the male noncriminal scores on the Levenson Self-Report Psychopathy Scale were significantly higher than their female counterpart. A study by Miller, Gaughan, and Pryor (2008) similarly found that men generated significantly higher total scores on the Levenson Self-Report Psychopathy scale in comparison to women noncriminals. After evaluating the influence of Factor 1 (affective and interpersonal features of psychopathy) and Factor 2 (social deviance features) on the overall score, alternate results were reported. Factor 2 revealed no significant gender differences and Factor 1 revealed significant gender differences, whereby males generated greater psychopathy scores. Additional studies have led researchers to further corroborate these findings, namely by revealing increased psychopathic traits in males compared to females (Epstein, Poythress, & Brandon, 2006; Forth, Brown, Hart, & Hare, 1996). In addition, the Diagnostic Statistical Manuel reports an increased diagnosis of psychopathy in males (3%) in comparison to females (1%) (American Psychiatric Association, 1980, 1987, 1994).

Moreover, research has shown that psychopathy manifests differently in men and women (Cale & Lilienfeld, 2002; Hamburger, Lilienfeld, & Hogben, 1996). The standards and diagnostic tools used to examine psychopathy in both genders have, to date, however been the same. According to Forouzan and Cooke (2005), there are four areas where disparities exist

between genders. First is the expression of psychopathic behavior. Such behaviors in women are more likely to be expressed as flirtatious, self-harming, manipulative, and complicit in committing crimes (Forouzan & Cooke, 2005; Nicholls & Petrila, 2005). Men, on the contrary, were more likely to engage in violence and conning behaviors (Forouzan & Cooke, 2005). Second, gender differences exist in their interpersonal characteristics. Classic psychopathy symptoms including superficial charm, glibness, and an exaggerated sense of self-worth, are only likely to manifest in women if they present with a severe form of the disorder (Forouzan & Cooke, 2005). Next, the underlying meaning of psychopathy in men and women could be interpreted differently. For example, in women, promiscuous sexual behavior may mirror their desire to promote self-gain. Females use their sexuality as a means of manipulation in order to acquire financial, social, or narcissistic values. In males, conversely, promiscuous sexual behavior may be interpreted as sensation seeking (Forouzan & Cooke, 2005). Last, the affect of societal norms and the potential bias associated with could contribute to the differences displayed amongst men and women. Using material dependency as an example, such is considered suitable for women, whereas men would be termed parasitic (Forouzan & Cooke, 2005).

The findings in the previous study and many alike could have inevitably been impacted by this lack of gender-disaggregated standards and diagnostic tools. In addition and more generally, female psychopathy is understudied, as it is a relatively new area of research (Nicholls & Petrila, 2005). Few studies have examined the manifestation of psychopathic features in men and women (Cale & Lilienfeld, 2002). Therefore, it is important to understand if the same standards and diagnostic tools could be applied to this population. Future studies are required to better understand gendered discrepancies in results.

The demographic variables, pose a notable limitation to the present study. In light of the fact that gender and educational institutions impacted the results of this study, it would be of interest to evaluate the effects of other variables on psychopathy. The significance of other demographic variables such as age, level of education, race, employment, and social status would be worthy of consideration for future studies.

Future directions

The coexistence of mental disorders with psychopathy, more specifically anxiety and depression, are a relatively new area of research within psychology. The present study lends support to the notion that future analyses are needed to further explore and better understand the relationship between these disorders. Further analyses would help generate more consistent results, and guide the focus and direction of future studies.

In the current study, the research sample was recruited from a university student population. The results can therefore not be generalized to a clinical population. There are other areas of research that have individually evaluated psychopathy, anxiety, and depression at the clinical level. This conceptualization was not possible in this research project given the lack of time and training required for this data collection.

Also of interest would be the study of depression, anxiety, and psychopathy using similar measures in both criminal and noncriminal populations. Little is known about the specific differences in psychopathy among criminal and non-criminal populations. Terms such as 'successful' psychopaths are used without a true understanding of the ways in which non-incarcerated psychopaths may differ from incarcerated psychopaths. It may well be that levels of anxiety and depression covary differently within these two populations.

Conclusion

The findings in the present thesis and past research are conflicting. Despite existing research assessing the relationship between psychopathy and comorbid mental disorders, there continues to be a gap in the literature. This relatively new area of research requires future studies to better understand the relationship between psychopathy, anxiety, and depression in a normal population. Replicating this study would contribute to the advancement of psychological knowledge and certainly to this growing area of research.

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Appendix A

Sixteen principles of psychopathy outlined by Cleckley

Table A. Sixteen principles of psychopathy outlined by Cleckley (1976)

Variable
1. Superficial charm and good intelligence
2. Absence of delusions and other sings of irrational thinking
3. Absence of “nervousness” or psychoneurotic manifestations
4. Unreliability
5. Untruthfulness and insincerity
6. Lack of remorse or shame
7. Inadequately motivated antisocial behavior
8. Poor judgment and failure to learn by experience
9. Pathologic egocentricity and incapacity for love
10. General poverty in major affective reactions
11. Specific loss of insight
12. Unresponsiveness in general interpersonal relations
13. Fantastic and uninviting behavior with drink and sometimes without
14. Suicide rarely carried out
15. Sex life impersonal, trivial and poorly integrated
16. Failure to follow any life plan

Appendix B

The psychopathy checklist items

Table B. The psychopathy checklist items (Hare, 1980)

Variable
1. Glibness/superficial charm
2. Previous diagnosis as psychopath (or similar)
3. Egocentricity/grandiose sense of self-worth
4. Proneness to boredom/low frustration tolerance
5. Pathological lying and deception
6. Conning/lack of sincerity
7. Lack of remorse or guilt
8. Lack of affect and emotional depth
9. Callous/lack of empathy
10. Parasitic life-style
11. Short-tempered/poor behavioral controls
12. Promiscuous sexual relations
13. Early behavior problems
14. Lack or realistic, long-terms plans
15. Impulsivity
16. Irresponsible behavior as parent
17. Frequent marital relationships
18. Juvenile delinquency
19. Poor probation or parole risk
20. Failure to accept responsibility or own actions
21. Many types of offense
22. Drug or alcohol abuse not direct cause of antisocial behavior

Appendix C

The Levenson Self-Report Psychopathy Scale

Levenson's Self-Report Psychopathy Scale

	STRONGLY DISAGREE	SOMEWHAT DISAGREE	SOMEWHAT AGREE	STRONGLY AGREE
1. Success is based on survival of the fittest; I am not concerned about the losers.				
2. For me, what's right is whatever I can get away with.				
3. In today's world, I feel justified in doing anything I can get away with to succeed.				
4. My main purpose in life is getting as many goodies as I can.				
5. Making a lot of money is my most important goal.				
6. I let others worry about higher values; my main concern is with the bottom line.				
7. People who are stupid enough to get ripped off usually deserve it.				
8. Looking out for myself is my top priority.				
9. Tell other people what they want to hear so that they will do what I want them to.				
10. I would be upset if my success came at someone else's expense.				
11. I often admire a clever scam.				
12. I make a point of trying not to hurt others in my pursuit of my goals.				
13. I enjoy manipulating other people's feelings.				
14. I feel bad if my words or actions cause someone else to feel emotional pain.				
15. Even if I were trying very hard to sell something. I wouldn't lie about it.				

	STRONGLY DISAGREE	SOMEWHAT DISAGREE	SOMEWHAT AGREE	STRONGLY AGREE
16. Cheating is not justified because it is unfair to others.				
17. I find myself in the same kinds of trouble, time after time.				
18. I am often bored.				
19. I find that I am able to pursue one goal for a long time.				
20. I don't plan anything very far in advance.				
21. I quickly lose interest in tasks I start.				
22. Most of my problems are due to the fact that other people just don't understand me.				
23. Before I do anything, I carefully consider the possible consequences.				
24. I have been in a lot of shouting matches with other people.				
25. When I get frustrated, I often "let off steam" by blowing my top.				
26. Love is overrated.				

Appendix D

The Childhood and Adolescent Taxon Scale – Self-Report

Childhood And Adolescent Taxon Scale--Self-Report (CAT-SR)

INSTRUCTIONS: Please answer the **following** questions **by circling** the **ap**propriate number or answer, or filling in the **blanks.**

1. Were you ever arrested before age 16?

Yes No

2. Did you live with both your natural parents until age 16?

Yes No

If you answered No, what was (were) the reason(s) for the separation?
(For example, death of a parent, one parent left, divorce, abandonment, removed from home, institutionalization).
.....
Again, if you answered No, were you separated for more than a month?

Yes No

3. Did you get in a lot of physical fights (excluding siblings) before you were 16 years old?

1. ..... 2.....3 .....4 .....5.....6.....7
no fights some fights a lot of fights

4. Please indicate whether or not you engaged in the following behaviors before you were 15 years old (circle Yes or No):

Initiating physical fights (often)	Yes	No
Lying often (Other than to avoid physical and/or sexual abuse)	Yes	No
Running away from home overnight (At least twice, or once without returning)	Yes	No
Stealing (including forgery)	Yes	No
Fire-setting (deliberately)	Yes	No
Skipping school (often)	Yes	No
Breaking into a car, house, or building	Yes	No
Vandalism (other than fire-setting)	Yes	No

Cruel to animals Yes No

Forcing sexual activity on someone Yes No

Using a weapon in more than one fight Yes No

Physically cruel to people Yes No

5. Did you ever have discipline problems and/or attendance problems (skipping class) at elementary school?

1 ..... 2 ..... 3 ..... 4 ..... 5 ..... 6 7
no problems some problems serious problems

6. Were you ever suspended or expelled from school?

Yes No

7. Have you ever felt that, as a teenager, you had a problem with alcohol (Ie. that your drinking interfered in some way with your life)?

1 ..... 2 ..... 3 ..... 4 ..... 5 ..... 6 7
no problem some problems serious problems

8. Do you feel that one or both of your parents had a drinking problem while you were growing up?

Yes No

Appendix E

The Beck Depression Inventory

Beck's Depression Inventory

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the **one statement** in each group that best describes the way you have been feeling during the **past two weeks, including today.** Circle the number beside the statement you have picked. If several statements in the group seem to apply equally week, circle the highest number for that group. Be sure that you do not choose more then one statement for any group, including Item 16 (changes in sleep pattern) or Item 18 (changes in appetite).

1. Sadness

0 I do not feel sad.
1 I feel sad much of the time.
2 I am sad all the time.
3 I am so sad and unhappy that I can't stand it.

2. Pessimism

0 I am not discouraged about the future.
1 I feel more discouraged about the future then I used to be.
2 I do not expect things to work out for me.
3 I feel my future is hopeless and will only get worse.

3. Past failure

0 I do not feel like a failure.
1 I feel I have failed more than I should.
2 As I look back, I see a lot of failures.
3 I feel I am a complete failure as a person.

4. Loss of pleasure

0 I get as much pleasure as I ever did from the things I enjoy.
1 I don't enjoy things as much as a used to.
2 I get very little pleasure from the things I used to enjoy.
3 I can’t get any pleasure from the things I used to enjoy.

5. Guilty feelings

0 I don't feel particularly guilty.
1 I feel guilty over many things I have done or should have done.
2 I feel quite guilty most of the time.
3 I feel guilty all of the time.

6. Punishment feelings

0 I don't feel I am being punished.
1 I feel I may be punished.
2 I expect to be punished.
3 I feel I am being punished.

7. Self-Dislike

0 I feel the same about myself as ever.
1 I have lost confidence in myself.
2 I am disappointed with myself.
3 I dislike myself.

8. Self-criticalness

0 I don't criticize or blame myself more then usual.
1 I am more critical of myself then I used to be.
2 I criticize myself for all of my faults.
3 I blame myself for everything bad that happens.

9. Suicidal thoughts or wishes

0 I don't have any thoughts of killing myself.
1 I have thoughts of killing myself, but I would not carry them out.
2 I would like to kill myself.
3 I would kill myself if I had the chance.

10. Crying

0 I don't cry any more than I used to.
1 I cry more than I used to.
2 I cry for every little thing.
3 I feel like crying but I can't.

11. Agitation

0 I am no more restless or wound up then usual.
1 I feel more restless or wound up than usual.
2 I am so restless or agitated that it's hard to stay still.
3 I am so restless or agitated that I have to keep moving or doing something.

12. Loss of interest

0 I have not lost interest in other people or activities.
1 I am less interested in other people or things than before.
2 I have lost most of my interest in other people or things.
3 It's hard to get interested by anything.

13. Indecisiveness

0 I make decisions about as well as I ever could.
1 I find it more difficult to make decisions then usual.
2 I have much greater difficulty in making decisions more than I used to.
3 I have trouble making any decisions anymore.

14. Worthlessness

0 I don't feel I am worthless.
1 I don't consider myself as worthwhile and useful as I used to.
2 I feel more worthless as compared to other people.
3 I feel utterly worthless.

15. Loss of energy

0 I have as much energy as ever.
1 I have less energy then I used to have.
2 I don't have enough energy to do very much.
3 I don't have enough energy to do anything.

16. Changes in sleeping pattern

0 I have not experienced any change in my sleeping pattern.
1a I sleep somewhat more than usual.
1b I sleep somewhat less than usual
2a I sleep a lot more than usual.
2b I sleep a lot less than usual.
3a I sleep more of the day.
3b I wake up 1-2 hours early and can't get back to sleep.

17. Irritability

0 I am no more irritable than usual.
1 I am more irritable than usual.
2 I am much more irritable than usual.
3 I am irritable all the time.

18. Changes in appetite

0 I have not experienced any change in my appetite.
1a My appetite is somewhat less than usual.
1b My appetite is somewhat greater than usual.
2a My appetite is much less than before.
2b My appetite is much greater then before.
3a I have no appetite at all.
3b I crave food all the time.

19. Concentration difficulty

0 I can concentrate as well as ever.
1 I can't concentrate as well as usual.
2 It's hard to keep my mind on anything for very long.
3 I find I can't concentrate on anything.

20. Tiredness or fatigue

0 I am no more tired or fatigued than usual.
1 I get tired or fatigued more easily than usual.
2 I am too tired or fatigued to do a lot of the things I used to do.
3 I am too tired or fatigued to do most of the things I used to do.

21. Loss of interest in sex

0 I have not noticed any recent change in my interest in sex.
1 I am less interested in sex than I used to be.
2 I have almost no interest in sex now.
3 I have lost interest in sex completely.

Appendix F

The Beck Anxiety Inventory

Beck Anxiety Inventory

Below is a list of common symptoms of anxiety. Please carefully read each item in the list. Indicate how much you have been bothered by that symptom during the past month, including today, by placing a check mark in the corresponding space in the column next to each symptom.

	NOT AT ALL	MILDLY It did not bother me much	MODERATELY It was very unpleasant, but I could stand it	SEVERELY I could barely stand it
1. Numbness or tingling				
2. Feeling hot				
3. Wobbliness in legs				
4. Unable to relax				
5. Fear of the worst happening				
6. Dizzy or lightheaded				
7. Heart pounding or racing.				
8. Unsteady				
9. Terrified				
10. Nervous				
11. Feelings of choking				
12. Hands trembling				
13. Shaky				
14. Fear of losing control				
15. Difficulty breathing				
16. Fear of dying				
17. Scared				
18. Indigestion or discomfort in abdomen				
19. Faint				
20. Face flushed				
21. Sweating (not due to heat)				

Appendix G

Consent Form

Consent Form

Title: *The Comorbidity of Psychopathy, Depression, and Anxiety Disorder*

Researcher: Amber Labow, student, Masters in Psychology, University of Montreal

Supervisor: Christopher Earls, Ph.D., Associate Professor, Arts and Science – Department of Psychology, University of Montreal

1. Research objective

The goal of this study is to analyze the relationship between psychopathy, depression, and anxiety disorder in a normal population. The experiment aims to generate a better understanding of the nature of the relationship and if these disorders coexist.

2. Participating in the study

Participating in the study consists of:

- Answering a series of questionnaires pertaining to psychopathy, anxiety, and depression. These questionnaires are given to participants in an educational setting. A total of four questionnaires will be administered: two psychopathy questionnaires, one depression, and one anxiety questionnaire. The questionnaires take approximately 20 minutes time to complete.

3. Confidentiality

All of the information provided by participants will remain confidential. Participants will respond to all of the questionnaires anonymously. No personal information will be acquired. All of the questionnaires will be coded numerically to ensure the participants identity remain unknown. All data will be destroyed 7 years after the study is complete in which time the participant's identity will continue to remain anonymous.

4. Advantages and disadvantages

Participating in this study will help further our existing knowledge on the relationship between psychopathy, depression, and anxiety disorder. This study does not involve any risks or disadvantages.

5. Withdrawal

Your participation in the study is completely voluntary. You have the right to withdraw from the study at any point in time without prejudice and without having to justify your decision. If you decide to withdraw, all of your data collected up until that point would be destroyed and excluded from the study.

6. Compensation

Participation in this study is voluntary and there will be no form of compensation given at the end of the data collection.

7. Consent

I, (First name, Last name).....declare that I have read and I understand the above information. I am aware of the goal, the nature, the advantages and the disadvantages of the study. I am willingly consenting to participate in the above study and I am aware of my right to withdraw at any point in time.

I agree to allow the data that has been collected during this study to be used in subsequent research projects if the ethics committee approves it and if the same aspects of confidentiality are applied.
Yes.....No.....

Participant's signature.....
Date .....

Researcher's signature.....
Date .....
Amber Labow, student, Masters in Psychology, University of Montreal

All complaints regarding participation in this study may be addressed to the ombudsman at the University of Montreal by telephone (514) 343-2100 (collect calls are accepted).

Appendix H

Demographics Questionnaire

Demographics Questionnaire

1. Age: ……

2. Gender:
    a. Male
    b. Female

3. Race:
    a. American Indian or Alaska Native
    b. Asian or Asian American
    c. Black or African American
    d. Hispanic or Latino
    e. Caucasian
    f. Other……

4. Employment status:
    a. Student
    b. Employed for wages
    c. Self-employed
    d. Unable to work
    e. Other……..

5. Level of education:
    a. High school diploma
    b. Diplôme d'études collégiales (DEC)
    c. Bachelor's degree
    d. Master's degree
    e. Doctorate

6. Befitting social status:
    a. Upper class
    b. Upper-middle class
    c. Middle-class
    d. Lower class
    e. Other……

Appendix I

Spearman's rho Correlation of all variables

Table I.

Spearman's rho Correlation of all variables

	Beck Depression Inventory	Childhood and Adolescent Taxon – Self-Report	Beck Anxiety Inventory	Levenson Psychopathy Scale	Primary Psychopathy	Secondary Psychopathy
Beck Depression Inventory	1					
Childhood and Adolescent Taxon – Self-Report	.23*	1				
Beck Anxiety Inventory	.54**	.09	1			
Levenson Self-Report Psychopathy Scale	.40**	.25*	.20	1		
Primary Psychopathy	.25*	.27*	.05	.92**	1	
Secondary Psychopathy	.44**	.12	.31**	.75**	.49**	1

*. Correlations are significant at the 0.05 level
**. Correlations are significant at the 0.01 level